

## CLAIMS

We Claim:

- 5     1.     A vehicle combined back-up and battery low-level alarm comprising:  
a back-up alarm circuit;  
a voltage sensing and comparing circuit;  
a timing circuit; and  
a gating circuit;  
10         wherein the gating circuit performs tone generation output in response to inputs  
from the back-up alarm circuit, voltage sensing and comparing circuit, and the timing  
circuit.
- 15     2.     The combined alarm of Claim 1, wherein the gating circuit comprises a  
microcontroller.
- 20     3.     The combined alarm of Claim 2, wherein the microcontroller incorporates an  
analog to digital converter.
- 25     4.     The combined alarm of Claim 1, which also comprises a signaling lamp.
5.     The combined alarm of Claim 4, which also comprises an ambient light sensor.
- 30     6.     The combined alarm of Claim 1, which is incorporated within a single housing.

7. The combined alarm of Claim 1, wherein the voltage sensing and comparing circuit is responsive to two different voltage thresholds.

5 8. The combined alarm of Claim 7, wherein there is different alarm mode timing for each respective voltage threshold.

9. The combined alarm of Claim 1, wherein the back-up alarm circuit has alarm mode  
10 precedence over the voltage sensing and comparing circuit.

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